

Abstract of the Disclosure

A power control system is disclosed for controlling the power supplied to a lighting system and limiting power during time of peak demands and the like wherein the lighting system includes a power source and a lighting load connected to the power source. The control system comprises a main transformer having a first winding and a second winding, the first winding being connected between the power source and the lighting load. An autotransformer connected to the power source having a plurality of electrical transformer taps with prescribed voltage values. A plurality of solid-state tap switches is connected to the transformer taps and to the second winding of the main transformer to apply the prescribed voltage values across the second winding. A system controller has an input for receiving a voltage change signal representing a selected load voltage to be applied to the lighting load. The controller is connected to the tap switches for selectively closing one of the tap switches to produce said prescribed voltage value across the second winding of the main transformer whereby the selected load voltage is output across the first winding of the main transformer and applied to the lighting load without interruption of the lighting. A transient control circuit is connected across an output of the tap switches for dissipating transient currents during switching of tap switches.